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/*Name: Sahil Badve PRN: B24CE1114 Div: S.Y.B-Tech 2 Batch C*/
#include <iostream>
using namespace std;

void bubbleSort(int scores[], int n) {
    int pass_count = 1;

    for (int i = 0; i < n - 1; ++i) {
        int swaps = 0;
        cout << "\n--- Pass " << pass_count << " ---" << endl;

        for (int j = 0; j < n - i - 1; ++j) {
            if (scores[j] > scores[j + 1]) {
                int scoreX = scores[j];
                int scoreY = scores[j + 1];

                int t = scores[j];
                scores[j] = scores[j + 1];
                scores[j + 1] = t;

                swaps++;
                cout << "Swapping " << scoreX << " with " << scoreY << endl;
            }
        }

        cout << "Scores after Pass " << pass_count << ": [";
        for (int t = 0; t < n; ++t) {
            cout << scores[t];
            if (t < n - 1) cout << ", ";
        }
        cout << "]" << endl;

        if (swaps == 0) {
            cout << "No swaps in Pass " << pass_count << ". Array is sorted." << endl;
            break;
        }

        pass_count++;
    }
}

void displayScores(const int scores[], int n) {
    cout << "Scores: [";
    for (int t = 0; t < n; ++t) {
```

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        cout << scores[t];
        if (t < n - 1) cout << ", ";
    }
    cout << "]" << endl;
}

int main() {
    const int NUM_SCORES = 5;
    int playerScores[NUM_SCORES];

    cout << "Enter " << NUM_SCORES << " scores:" << endl;
    for (int i = 0; i < NUM_SCORES; ++i) {
        cout << "Score " << (i + 1) << ": ";
        cin >> playerScores[i];
    }

    cout << "\nInitial ";
    displayScores(playerScores, NUM_SCORES);

    cout << "\nSorting..." << endl;
    bubbleSort(playerScores, NUM_SCORES);

    cout << "\nSorted ";
    displayScores(playerScores, NUM_SCORES);

    return 0;
}
```

OUTPUT:-

```
Enter 5 scores:
Score 1: 5
Score 2: 4
Score 3: 3
Score 4: 2
Score 5: 1

Initial Scores: [5, 4, 3, 2, 1]

Sorting...

--- Pass 1 ---
Swapping 5 with 4
Swapping 5 with 3
Swapping 5 with 2
Swapping 5 with 1
Scores after Pass 1: [4, 3, 2, 1, 5]

--- Pass 2 ---
Swapping 4 with 3
Swapping 4 with 2
Swapping 4 with 1
Scores after Pass 2: [3, 2, 1, 4, 5]

--- Pass 3 ---
Swapping 3 with 2
Swapping 3 with 1
Scores after Pass 3: [2, 1, 3, 4, 5]

--- Pass 4 ---
Swapping 2 with 1
Scores after Pass 4: [1, 2, 3, 4, 5]

Sorted Scores: [1, 2, 3, 4, 5]
```